

1 NEAR-INFRARED REFLECTING, ULTRAVIOLET PROTECTED,
 SAFETY PROTECTED, ELECTROCHROMIC VEHICULAR GLAZING

ABSTRACT OF THE DISCLOSURE

5 An electrochromic window/glazing assembly is
disclosed which reduces the transmission of near-infrared
and ultraviolet radiation while protecting against risk of
laceration or chemical contact if broken/damaged, against
ultraviolet (UV) radiation degradation, and against fogging
or misting in high humidity conditions. The window assembly
10 may include a pair of glass or other elements confining an
electrochromic medium therebetween for varying the light
transmittance through the assembly. Transmission of
near-infrared radiation is reduced by a reflector
incorporating at least one semitransparent, elemental, thin
15 metal film. Preferably, the thin metal film has a physical
thickness of between about 80 angstroms to about 300
angstroms and of sheet electrical resistance of no greater
than about 8 ohms/square, and is sandwiched between
optically transparent thin metal compound films to form a
20 thin film stack. One of the elements also may be laminated
from a pair of optically transparent, tinted, tempered
safety, or other glass panels and incorporate UV radiation
reducing paint/lacquer coatings or tinted or clear polymeric
films. The tinted glass preferably absorbs substantially
25 more light in those regions of the visible spectrum higher
than about 560 nanometers than in other regions of the
visible spectrum.